

Trends in Presentations at the Annual Conference of the Association for Behavior Analysis

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The present report analyzes trends in attendance and presentations at the annual conference of the Association for Behavior Analysis (ABA). Numbers of registered attendees were plotted over time. The trends show that the number of registered attendees has grown considerably over the last three decades, with the largest proportion of the growth occurring during the last 10 years. This growth is shown to be correlated with the introduction of board certification in behavior analysis (BCBA and BCABA). In addition, conference programs from 1980 through 2007 were coded, and all presentations were categorized into one of four areas (application, basic research, conceptual, and verbal behavior) based on the primary designator codes chosen by the authors at the time of submission. An analysis of the total number of presentations in each category indicates that applied research presentations have always outnumbered the other three categories. The absolute number of presentations related to application has grown faster than presentations in other categories. However, correcting for population growth shows that the relative proportion of presentations in the four areas has remained fairly constant over the last 28 years.

Key words: Association for Behavior Analysis, conference presentations, attendance, trends

The annual conference of the Association for Behavior Analysis (ABA) began in 1974 as the Midwestern Association for Behavior Analysis (MABA)—a small gathering of behavior analysts who were dissatisfied with the program of the Midwestern Psychological Association (MPA) (Dinsmoor, 1979) and were having difficulty presenting their work at MPA and other more mainstream conferences (Peterson, 1978). In 1978, the name was changed to the Association for Behavior Analysis to reflect the increasing national and international membership.

In the last 33 years, the annual conference has grown considerably,

both in terms of the number of people attending and the amount of information presented (see the ABA programs, 1974 through 2007). The primary purpose of this paper is to describe the growth of the annual conference in terms of these two features. For example, has attendance at the annual conference grown at a constant factor, or are periods of relative stability punctuated by periods of rapid growth? What variables may be responsible for this growth? Is the growth characterized by increased participation in particular specialties such as application or basic research, or is the increase in participation more diffuse across all areas of behavior-analytic activities? Has the information presented at ABA changed? If so, how? Is it possible to discern changes in presentation trends?

Analyses such as these can serve a variety of purposes. First, they can be useful in allowing a more complete characterization of the growth and development of the discipline. For example, a detailed description of

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presentation trends at the conference may help to identify areas in which behavior-analytic activity is strong as well as other areas that have perhaps not garnered as much attention. Given the fact that ABA's program committee rejects few (if any) submissions, there is a strong sense in which presentation trends at the annual conference serve as a fair sample of the activities of academic and professional behavior analysts. That is, presentation trends at ABA may reflect changes in priorities in the behavior of academicians and practitioners.

In addition, presentations and attendance at the annual conference can serve as a measure of the effects of changes in the professional climates of academic and professional behavior analysts. For example, the introduction of professional accreditation (e.g., Behavior Analyst Certification Board) creates a host of related contingencies that involve earning and maintaining certificates and licenses (e.g., Shook, 2005; Shook & Neisworth, 2005). Has the onset of professional certification requirements in behavior analysis been associated with discernible changes in the presentation and attendance trends at the annual conference? Answers to questions such as these may be useful in understanding changes that have been observed and in predicting future changes.

In this paper, we seek to add some data to the discussion of these issues by examining and summarizing trends in presented symposia, panel discussions, paper sessions, and invited addresses at the annual conference over the last 28 years.

METHOD

An analysis of attendance patterns at the annual conference was conducted. Data for the first 3 years (1975–1977) were estimated from Peterson's (1978) detailed description of the early years of ABA's organization. The data from 1979 to 2007 were

generously provided by the Association for Behavior Analysis (M. E. Malott, personal communication).

An analysis of conference programs from 1980 to 2007 was conducted and served as the primary source of data in identifying trends in conference presentations. For each year, certain presentations (described in detail below) were categorized into four broad areas—application, basic research, conceptual, and verbal behavior—based on the primary designator codes chosen by the authors at the time of submission. For the purposes of this analysis, only programmed symposia, paper sessions, invited addresses, and panel discussions were scored. Although other events such as presidential addresses, workshops, meetings of special interest groups, and meetings of editorial boards are an important part of the conference, these events do not have designator codes; thus, they were considered to be out of the scope of the current analysis and were not scored. (Data from poster sessions were scored and results can be obtained from either author.)

With the exception of panel discussions, each submission to one of the scored events counted as one presentation. That is, each invited address was scored as one presentation in its given category, and each individual address in a paper session or symposium was scored as an individual presentation in its respective category. Panel discussions were scored as one presentation regardless of the number of members on the panel because although several speakers contribute, the topic is shared and dynamic interchange of viewpoints is more common than uninterrupted presentations of prepared materials.

Categorization

Beginning with the 1980 conference, ABA submission guidelines have required the authors to select area designator codes for their presenta-

tions. Although these codes have changed over the last 28 years (e.g., the introduction of new categories, renaming of old categories, the consolidation or expansion of existing categories), their distinct themes have remained fairly consistent. The presentations were categorized into the following four categories: application, basic research, conceptual, or verbal behavior (see Tables 1, 2, 3, and detailed descriptions below).

Application

This category consisted of designator codes related to research in field settings and issues pertaining to service delivery (e.g., Baer, Wolf, & Risley, 1968; Johnston, 1996). In terms of the categories in use under the 2007 submission guidelines, the applications category contained the following primary designator codes: AUT (autism), CBM (clinical, family, behavioral medicine), DDA (developmental disabilities), EDC (education), OBM (organizational behavior management), and DEV (human development, gerontology).

Basic Research

This category consisted of designator codes related to experimental research in laboratory and nonlaboratory settings. Again, in terms of the categories in use under the 2007 submission guidelines, this category consisted of the following primary designator codes: EAB (experimental analysis of behavior) and BPH (behavioral pharmacology).

Conceptual

This category consisted of presentations in which the primary focus was on issues of conceptual and theoretical interest to the field. In terms of the categories in use under the 2007 submission guidelines, this category consisted of the following primary designator codes: TPC (theoretical, philosophical, and con-

ceptual issues), TBA (teaching behavior analysis), and CSE (community interventions, social and ethical issues).

Verbal Behavior

A separate category consisting of one primary designator code (VRB) was created for several reasons. First, VRB has been available as a code for presentations related to verbal behavior since 1980 (see Table 3). As such, basic laboratory and nonlaboratory experiments, applied research and development, and conceptual issues dealing with verbal behavior have been categorized as VRB. Second, a specialized journal was created for this subject matter. *The Analysis of Verbal Behavior* was first published in 1982 by the Verbal Behavior Special Interest Group of ABA and then adopted by ABA in 1995. Any attempt to recategorize these presentations as applied, basic, or conceptual would have required subjective decisions about category membership based on the titles of presentation alone.

One judgment call was inescapable. Although appearing infrequently, presentations with primary designator codes of OTH (other) and GEN (general) were recategorized into one of the four categories based on their titles. These subjective decisions were rare, in that presentations with these designator codes usually comprised less than 5% of the presentations in any given year.

RESULTS AND DISCUSSION

We take up analyses of the attendance trends and presentation trends separately in the following section. Figure 1 presents the number of registered attendees at the annual convention for every year since 1974. These data show that, during the first 15 years of the conference, convention registration grew slowly from about 1,000 at the 1975 meeting of MABA to 1,257 at the 1989

TABLE 1
Applied Catagories (1980–2007)

[illegible]

TABLE 1

Extended

[illegible]

TABLE 2
Experimental Catagories (1980–2007)

Description	Code	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Behavioral Pharmacology & Toxicology	PAT	1													
Behavioral Pharmacology & Toxicology	BPT	1	2	11	3	21									
Behavioral Pharmacology & Toxicology	TOX						11	23	20	38	16	17	13	21	25
Behavioral Pharmacology	BPH														
Experimental & Theoretical Analysis	ETA	43													
Experimental Analysis	EXP		25	58	52	45	82	46	5	50	39				
Experimental Analysis of Behavior - Human Subjects	EABH											42	49		
Experimental Analysis of Behavior - Nonhuman Subjects	EABN											26	36		
Experimental Analysis of Behavior	EAB													109	63
Other (Basic)	OTH-B										1				

TABLE 2
Continued

Description	Code	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Behavioral Pharmacology & Toxicology	PAT														
Behavioral Pharmacology & Toxicology	BPT														
Behavioral Pharmacology & Toxicology	TOX	29	17	11	12	0	16	12							
Behavioral Pharmacology	BPH								13	15	21	18	23	25	27
Experimental & Theoretical Analysis	ETA														
Experimental Analysis	EXP														
Experimental Analysis of Behavior - Human Subjects	EABH														
Experimental Analysis of Behavior - Nonhuman Subjects	EABN														
Experimental Analysis of Behavior	EAB	105	92	122	98	118	90	92	76	82	147	164	175	173	145
Other (Basic)	OTH-B		3		4	3	8	6	7	9	8	0	4	8	1

TABLE 3

Conceptual and Verbal Behavior Catagories (1980–2007)

Description	Code	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Behavioral Observation, Assessment, & Methodology	BOA	19	46	23	23	26			28						
Conceptual Analysis	CNC												25		5
Computer Applications	COM					29	35	32	22	31	12	28	13		
Conceptual & Philosophical Analysis	CPA	30													
Community Interventions; Social and Ethical Issues	CSE														
Current Trends / Issues in Behavior Analysis	CTB								85						
Ethical, Legal, & Social Issues	ELS							11			14	8	16	19	12
Ethical Issues in Behavior Analysis	ETH								10	19					
General Issues in Behavior Analysis (Theoretical)	GEN-T	9	20	17	39	58	40				29				
Historical Analysis	HST											3	3		
Research Methods	MTH											13	7		
Other (Theoretical)	OTH-T							28	7	3		12	35	2	18
Behavior Analysis and Social Issues	SOC								14						
Teaching Behavior Analysis	TBA														
Theoretical & Philosophical Issues	TPA		48	43	30	29	34	47	4	76	34	5		0	
Theoretical, Philosophical, and Conceptual Issues	TPC														
Women's Issues in Behavior Analysis	WIA	14	15	10	7	2									
Verbal Behavior	VRB	11	19	24	16	32	19	10	35	26	8	27	20	10	29

havior Analysis Certification Board stipulate that the BCBA earn a minimum of 36 continuing education (CE) credits every 3 years to maintain certification (Shook, 2005). The certification program began in 1998. The attendance data in Figure 1 show larger than usual increases in the number of registered attendees in 2001, 2004, and 2007. The timing of the increase in attendance suggests that the requirements to maintain

board certification are closely correlated with attendance at the conference. Taken together, these data suggest that CE requirements to maintain certification as BCBA or BCABA may be at least partly responsible for the increased rate at which attendance has grown over the last 8 years.

The following analyses focus specifically on changes in the number of presentations that offer CE credits

TABLE 3

Continued

Description	Code	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Behavioral Observation, Assessment, & Methodology	BOA														
Conceptual Analysis	CNC														
Computer Applications	COM														
Conceptual & Philosophical Analysis	CPA														
Community Interventions; Social and Ethical Issues	CSE					29	33	21	25	15	32	47	23	34	57
Current Trends / Issues in Behavior Analysis	CTB														
Ethical, Legal, & Social Issues	ELS	11	21	24	14										
Ethical Issues in Behavior Analysis	ETH														
General Issues in Behavior Analysis (Theoretical)	GEN-T														
Historical Analysis	HST														
Research Methods Other (Theoretical)	MTH OTH-T	3	7	20	1	9	3	13	3	2	2	12	11	3	5
Behavior Analysis and Social Issues	SOC														
Teaching Behavior Analysis	TBA				30	55	55	35	25	24	40	54	23	19	21
Theoretical & Philosophical Issues	TPA														
Theoretical, Philosophical, and Conceptual Issues	TPC	77	112	56	38	37	50	38	31	44	65	57	54	50	52
Women's Issues in Behavior Analysis	WIA														
Verbal Behavior	VRB	14	16	24	15	17	18	31	38	28	57	59	53	54	53

over the last 8 years. Figure 2 presents the number of workshops (events not included in the presentation analysis below) offering CE credits since 2000. The number of scheduled workshops has increased from 41 in 2000 to 101 in 2007. Also, an increase in the number of workshops offered in 2003 began an upward trend that continues to date. It is possible that the increase in the number of scheduled workshops reflects an increase in the number of

attendees seeking CE credits. Workshops are an especially efficient mechanism for earning CE credits because they allow attendees to earn several CE credits at once.

In addition to workshops, CE credits may be earned at select conference presentations. The ABA program book began identifying presentations offering CE credits in 2005. Figure 2 also shows the proportion of nonworkshop presentations that offer CE credits. In 2005,

Number of Registered Attendees

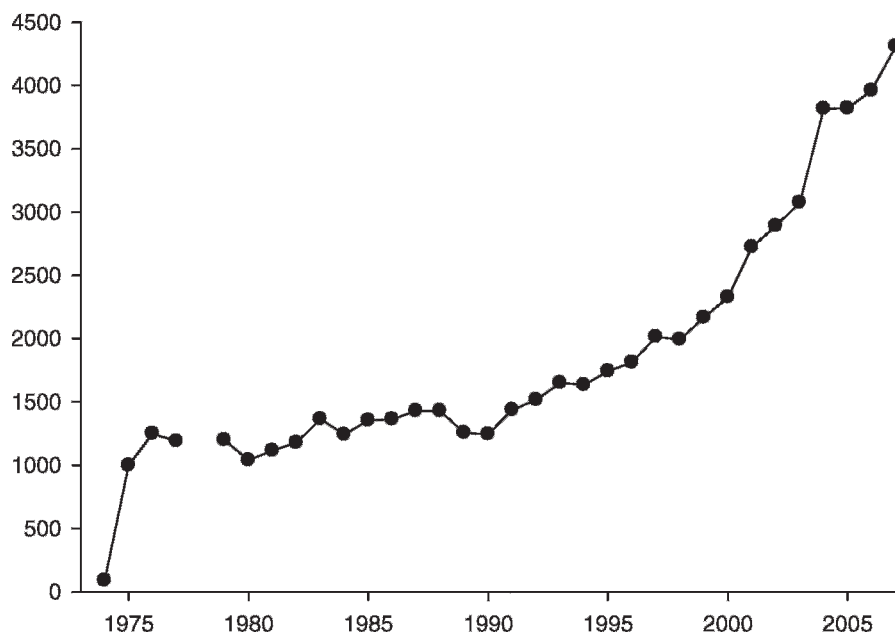


Figure 1. The total number of registered attendees for each year from 1974 to 2007. The data for the first 4 years (1974–1977) were estimates based on Peterson (1978). No data were available for 1978. Data from 1979 to 2007 were generously made available by the Association for Behavior Analysis.

252 (approximately 26%) of the 972 presentations offered CE credits, with 80% of those credits coming from applied presentations and approximately 6%, 10%, and 4% of the credits coming from basic, conceptual, and verbal behavior presentations, respectively. In 2006, 316 (approximately 31%) of the 1,034 presentations offered CE credits, with approximately 85% of those coming from applied presentations and approximately 5%, 7%, and 3.5% coming from basic, conceptual, and verbal behavior presentations, respectively. In 2007, 387 (approximately 36%) of the 1,077 presentations offered CE credits, with approximately 86% of those coming from applied presentations and approximately 3%, 5%, and 6% coming from basic, conceptual, and verbal behavior presentations, respectively. As the number of BCBA and BCABA increases, the demand for

CE credits will also continue to increase. It is possible that these changes in the number of attendees and the reasons for their attendance will come to influence presentation trends. In particular, one may expect to see an increase in presentations geared toward service delivery and best practices. No such trends were detectable in the current analysis, because coding based on titles alone was avoided.

Figure 3 presents the total number of presentations per year from 1974 to 2007. Again, data from 1974 to 1977 were estimated from Peterson's (1978) account. Data for 1978 and 1979 could not be reasonably extracted from available resources. There were three distinct periods of growth in the number of presentations. The first period of growth was from 1974 to 1977, when the number of presentations grew from 8 to over 100. The second period came between

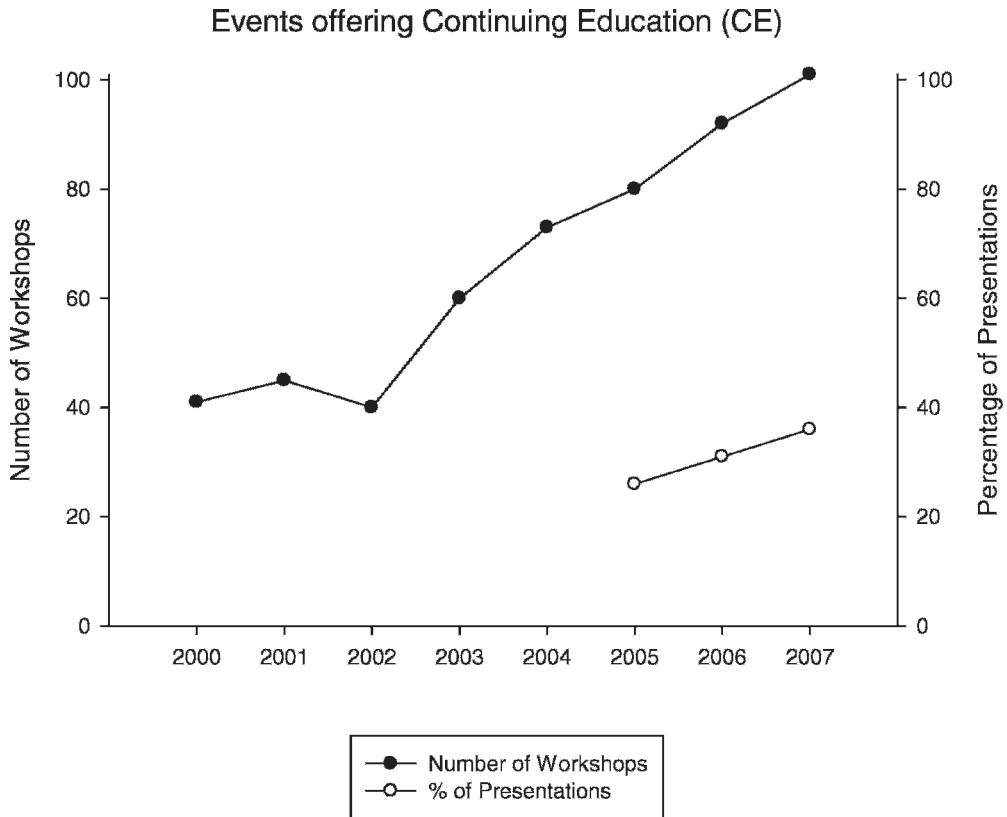


Figure 2. The number of workshops since 2000 (filled circles) offering continuing education and the percentage of presentations since 2005 offering continuing education (open circles).

1989 and 1996, when the number of presentations grew from 412 to 740 (an 80% increase). The most recent increase in submissions began with the 2003 convention, during which 999 presentations were scheduled (a 45% increase from the previous year).

The following analyses represent an attempt at a more fine-grained description of these patterns of growth. As mentioned above, ABA began requiring that authors select a primary area designator for each presentation at the time of submission. The frequency and distribution of the primary area codes served as the primary methodology for the analyses that follow. Because designator codes were not used until 1980, all subsequent analyses will be limited to the period from 1980 to 2007.

Tables 1, 2, and 3 present the number of presentations for each of the primary designator codes for each year of the ABA conference from 1980 to 2007. In each table, a blank cell indicates that the primary designator code was not available in that year's ABA submission guidelines. For example, Table 1 shows that AUT first became available as a primary area code in 1998 and that there were 61 presentations using AUT as a primary area designator that year.

In these tables, the primary designator codes are further subdivided into thematically related subcategories. The subcategories were based on our understanding of the themes that related the primary designator codes. For example, the primary area designator codes OGB (organization-

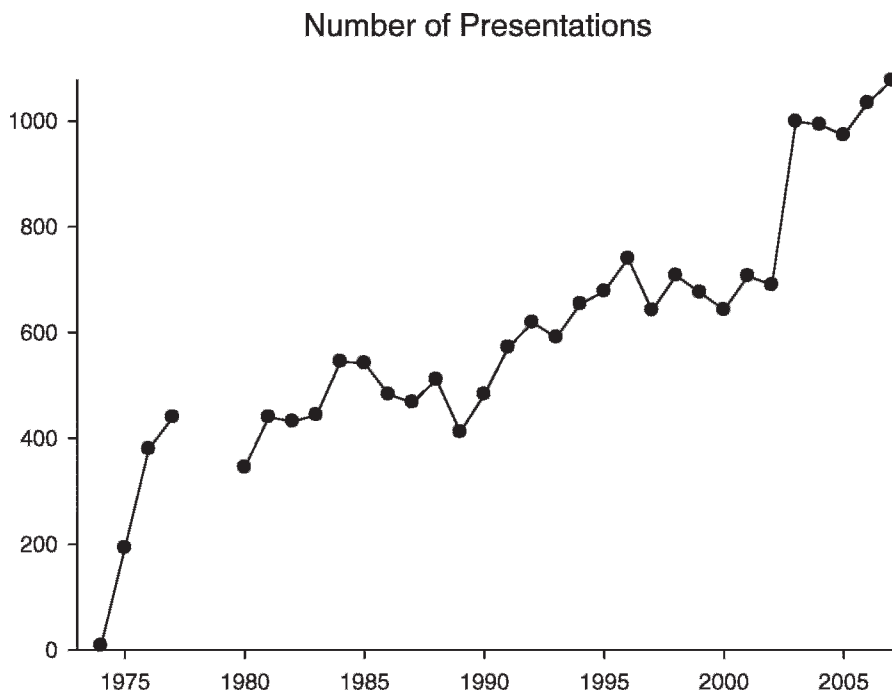


Figure 3. The total number of presentations for each year from 1974 to 2007. The data for the first 4 years (1974–1977) were estimates based on Peterson (1978). No data were available from 1978 and 1979. Data from all other years were derived from conference programs.

al behavior and systems management), PRM (performance management and training), and OBM (organizational behavior management) are together in a subcategory because all deal with a related population in the work environment. The subcategories were arranged based on a “word family” approach. The tables are presented as an invitation to the reader to rearrange these themes in accord with personal preferences or to ask other questions of the data. (Data from Tables 1, 2, and 3 can be obtained in Microsoft Excel® format from either author.)

Primary area designator codes within subcategories are further arranged from oldest to most recent to highlight the additions of new categories. For example, in 1998 autism was assigned its own category and currently rivals DDA in number of presentations. The tables are also presented to highlight the deletions of short-lived categories within ABA, such as sports behavior

analysis, which lasted from 1986 to 1988, and corrections, which lasted from 1991 to 1997. Other short-lived categories include women’s issues in behavior analysis and computer applications in behavior analysis. In addition, the tables illustrate the consolidation of primary area designators within a subfield. For example, special education was at one time differentiated from education at various age levels and later merged into the broad category of education. Indeed, although a large number of applied subcategories were used during the first 15 years of the conference, submission categories have become concentrated on autism, developmental disabilities, and education. An interesting question is whether these consolidations are just in terms of the designator codes selected by authors or whether they reflect actual consolidation of the activities of behavior analysts. Whereas the former would only be of trivial interest concerning

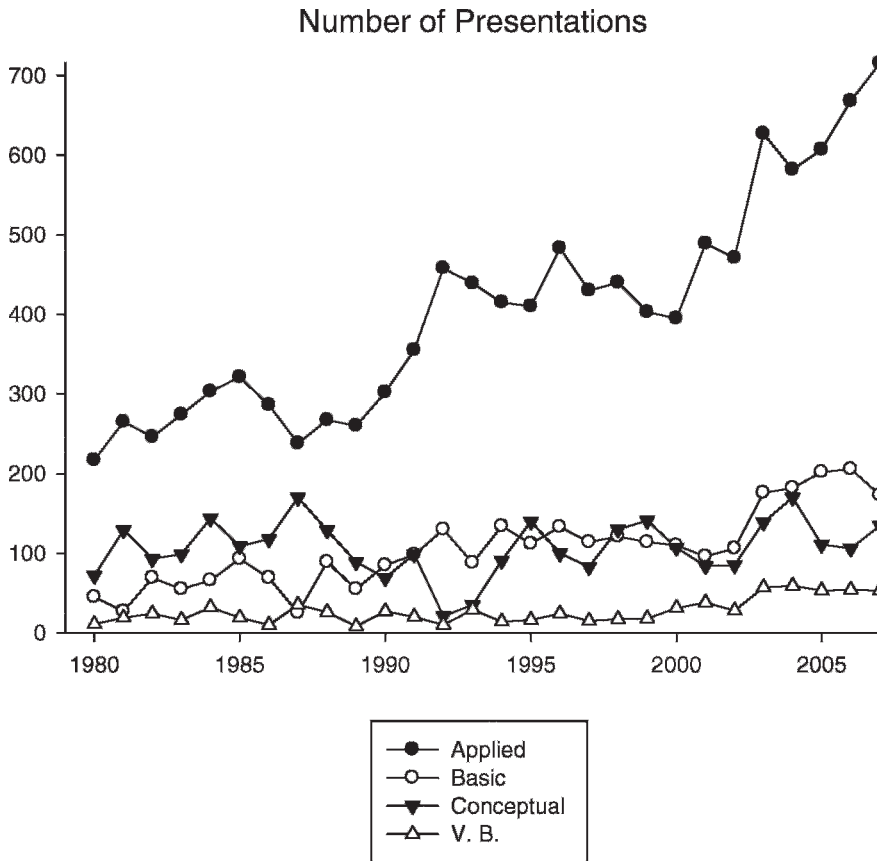


Figure 4. The number of presentations arranged by category from 1980 to 2007. See text for categorization method.

the categorization practices of submitting authors, the latter may have large implications for understanding the growth of the field. These analyses were out of the scope for the current paper but should be a part of future analyses.

Viewed more broadly, these tables highlight a number of other interesting details. First, although category name changes, additions, and deletions appear in most conference programs, there were two large consolidations of categories—one in 1985 and the other in 1992. These changes do not appear to have been in response to a sudden increase or decrease in attendance. However, 1984 and 1991 had seen the largest number of presentations in the history of the conference to that date. It is

plausible, then, that the category consolidation and redefinition were driven by, or at least correlated with, increased submissions.

Figure 4 presents the total number of presentations divided into our four categories. There have been increases in each category over the last 28 years. Applied presentations have always outnumbered both basic research presentations and conceptual presentations, which have remained roughly equal. The frequency of VRB presentations has remained low and fairly constant, probably due to the nature of the circumscribed category. In addition, the growth in the number of applied and experimental presentations is characterized by periods of relative stability punctuated by short periods of rapid growth. For

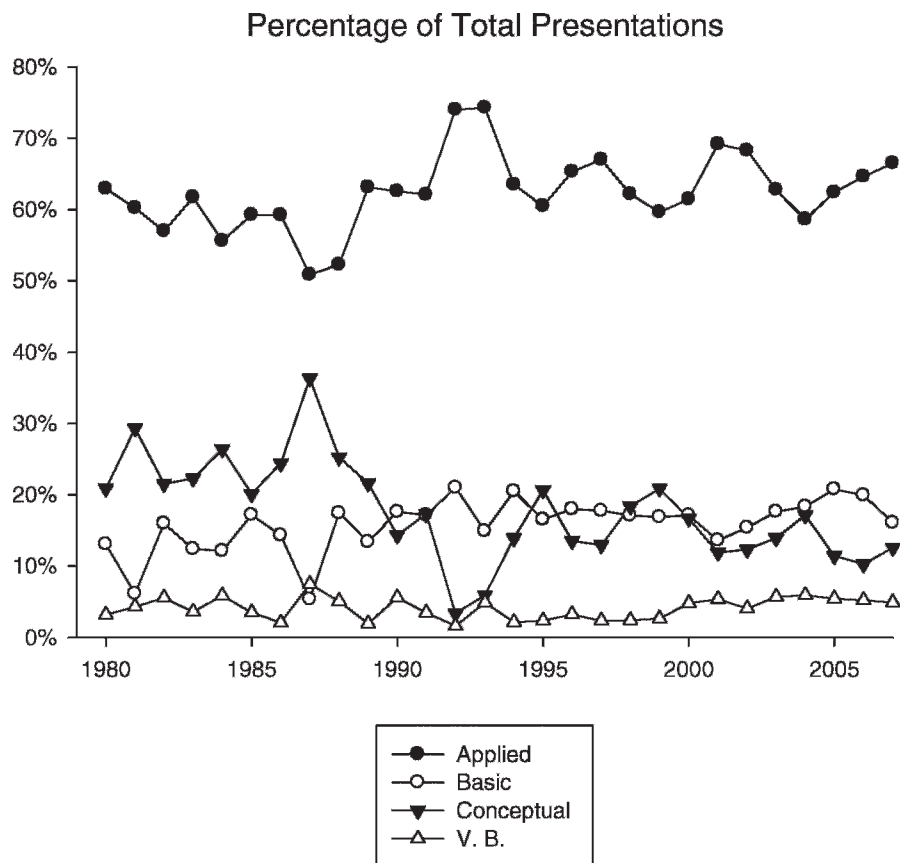


Figure 5. The number of presentations arranged by category expressed as a proportion of the total number of presentations each year from 1980 to 2007.

example, the number of applied presentations varied between 217 and 302 presentations from 1980 to 1990. From 1990 to 1992, the number of applied presentations increased from 302 to 458 and then varied between 458 and 471 from 1992 to 2002. In 2003, the number of applied presentations increased to 627 (a 25% increase from the previous year).

The greater preponderance of applied presentations and the substantial increases in absolute numbers in the last few years could lead some to make informal observations about the conference becoming more and more “applied.” To evaluate this possibility, we looked at the number of presentations in each category as a proportion of the total number of presentations for that year. Figure 5

shows that, when corrected for increases in the number of presentations overall, the relative distribution of presentations has remained fairly stable across areas. These data show that ABA has always had a larger percentage of presentations related to application than to any other issue. Figures 4 and 5, taken together, also show that, aside from minor fluctuations, the proportion of presentations categorized as applied (by us) has not changed since the conception of the conference.

These measures, however, do not allow us to judge other dynamics that may bear on the broad issues of interest. For example, although the number of presentations per category has remained proportionately stable over the history of the conference,

attendance patterns may have been changing and are not measured by the present analyses. That is, the ratio of people actually attending applied, basic, and conceptual presentations may have changed substantially even though the number of presentations has remained fairly constant.

Finally, these analyses suggest a novel function for the designator codes required by ABA at the time of submission. Specifically, these analyses suggest that the codes could serve as meaningful barometers of changing priorities and practices in behavior analysis. Along those lines, these analyses may be taken to suggest that more explicit consideration be given to the choice of designator codes and that they are designed in a way that facilitates the kind of analyses presented here. Also, the limitations identified by these analyses could serve to encourage ABA to collect other data (e.g., on attendance patterns at the various presentation types). These data would further enhance our understanding of the changes that occur in the annual conference as well as in the field at large.

In conclusion, the present analysis reveals some interesting information about the growth of ABA's annual conference. With respect to attendance, the number of people at the annual conference has increased consistently since 1990. The largest changes in conference attendance have occurred since 1998 and may have been driven by continuing education requirements stipulated by

the BACB to maintain certification. The presentation data also show that there have been periods of slow but consistent growth (e.g., 1989–1996) but also punctuated increases (e.g., 2003) in the number of presentations at the annual conference. With respect to trends in the number of presentations in our four defined categories, the numbers have grown but the relative proportions have remained fairly constant. Future investigations should ascertain the extent to which distribution of attendance within presentation categories has changed, which would allow for a more dynamic quantification of the relations among the measures reported here.

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